ABSTRACT OF THE DISCLOSURE

A system, method, and computer program product for fractal video coding, based on the circular prediction mapping (CPM) in overcomplete wavelet domain. According to the disclosed process, each range block [B] is approximated by a domain block [A] in circularly previous frame [F_{n-1}]. The size of the domain block is made larger than that of the range block using a complete-to-overcomplete transform [Fig 2], which provides faster convergence speed compared to the conventional CPM algorithm that uses the same domain block size. However, high temporal correlation is very well exploited between the adjacent frames, since the extended reference [210] is generated by shifting the original image [202] and hence retains the high temporal correlation to the range blocks. Furthermore, the preferred embodiment provides a spatial scalability.